SRI LANKA STANDARD 648:1984

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SPECIFICATION FOR
RUBBER SEED OIL

SRI LANKA STANDARDS INSTITUTION

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SLS 648:1984

Gr. 5

SRI LANKA STANDARDS INSTITUTION
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This standard does not purport to include all the necessary provisions of a contract.

SRI LANKA STANDARD

SPECIFICATION FOR RUBBER SEED OIL

FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Sri Lanka Standards Institution on 1984-05-28, after the darft, finalized by the Drafting Committee on Paints had been approved by the Chemicals Divisional Committee.

Rubber seed oil is obtained from seed kernels of rubber tree (*Hevea brasiliensis* Muell. Arg.), and is yellow to brown in colour with a characteristic odour. Linoleic acid (40 to 55 per cent), Linolenic acid (15 to 30 per cent) and Oleic acid (15 to 30 per cent) are the major unsaturated fatty acids present in rubber seed oil, Palmitic acid and Stearic acid being the major saturated fatty acids.

For the purpose of deciding whether a particular requirement of this specification is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with **CS 102**. The number of significant places retained in the rounded off value should be the same as that of the specified value in this specification.

In the preparation of this specification, the assistance obtained from the publications of the Indian Standards Institution is gratefully acknowledged.

1 SCOPE

This specification prescribes requirements and methods of sampling and test for rubber seed oil used in the paint industry.

2 REFERENCES

ISO 662 Determination of moisture and volatile matter content in animal and vegetable fats and oils

ISO 842 Sampling for raw materials for paints and varnishes

ISO 3961 Determination of iodine value in animal and vegetable fats and oils

CS 102 Presentation of numerical values

SLS 313 Methods of analysis of oils and fats and fatty materials

SLS 428 Random sampling methods.

3 REQUIREMENTS

3.1 General

The material shall be obtained from clean and sound seed kernels of rubber tree (*Hevea brasiliensis* Muell. Arg.) by the process of expression or from cake or seed kernels by a process of solvent extraction. If shall be clear and free from admixture with other oils, adulterants, sediments, suspended and other foreign matter and separated water.

3.2 Clarity

Material when tested as given in 7.2 shall be free from insoluble impurities.

3.3 Colour

The colour shall be subject to agreement between the buyer and the seller and shall not be darker than that of an agreed sample. The colour shall be expressed in terms of yellow and red units on a Lovibond scale measured through a 10-mm cell.

3.4 Other requirements

The material shall also comply with the requirements given in Table 1.

TABLE 1 - Requirements for rubber seed oil

Sl.No. (1)	Characteristic (2)	Requirement (3)	Method of test (4)
i)	Moisture, and volatile matter content, per cent by mass, max.	1.0	ISO 662 - Method A
ii)	Refractive index, at 40 °C	1.4600 to 1.4700	SLS 313
iii)	Acid value, max.	50	SLS 313
iv)	Iodine value (Wijs), min.	130	ISO 3961
v)	Saponification value,	180 to 195	SLS 313
vi)	Unsaponifiable matter, per cent by mass, max.	1.5	SLS 313

4 PACKAGING

The material shall be packed in suitable, well closed containers as agreed to between the purchaser and the supplier.

5 MARKING

5.1 The containers shall be marked legibly and indelibly with the following information:

a) Name of the material;

b) Net mass, in kilogram, of the material;

c) Manufacturer's name and address;

d) Recognized trade mark, if any; and

e) Batch or code number.

5.2 The containers may also be marked with the Certification Mark of the Sri Lanka Standards Institution illustrated below on permission being granted for such marking by the Sri Lanka Standards Institution.

NOTE - The use of the Sri Lanka Standards Institution Certification Mark (SLS Mark) is governed by the provisions of the Sri Lanka Standards Institution Act and the regulations framed thereunder. The SLS Mark on products covered by a Sri Lanka Standard is an assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by the Institution and operated by the producer. SLS marked products are also continuously checked by the Institution for conformity to that standard as a further safeguard. Details of conditions under which a permit for the use of the Certification Mark may be granted to manufacturers or processors may be obtained from the Sri Lanka Standards Institution.

6 SAMPLING

Representative samples of the material for ascertaining conformity to the requirements of this specification shall be drawn as prescribed in Appendix A.

7 METHODS OF TEST

7.1 Tests for the requirements given in this specification shall be carried out as prescribed in Column 4 of Table 1 and 7.2.

7.2 Heat a well mixed test portion of sample to 65 °C and examine it immediately for the presence of insoluble impurities. (see 3.2).

8 CONFORMITY TO STANDARD

A lot shall be declared as conforming to the requirements of this specification if the following conditions are satisfied.

8.1 Each container examined as in A.8.1 satisfies the relevant requirements.

8.2 The composite sample tested as in A.8.2 satisfies the relevant requirements.

APPENDIX A

PROCEDURE FOR SAMPLING OF RUBBER SEED OIL

A.1 Lot

All the containers of same size containing rubber seed oil produced under conditions which are presumed uniform (or belongings to the one batch of manufacture) shall constitute a lot.

A.2 SAMPLING INSTRUMENTS

Sampling tubes (for details see 5.26 and 5.27 of ISO 842).

A.3 CONTAINERS FOR SAMPLES

The containers used shall be either bottles of metal cans.

A.4 GENERAL REQUIREMENTS OF SAMPLING

A.4.1 Sampling shall be carried out in such a manner as to protect the samples, the material being sampled, the sampling instruments and the containers in which the samples are placed, from adventitious contamination such as rain, dust etc.

A.4.2 All sampling apparatus shall be clean and dry when used.

A.4.3 Prior to sampling each container selected for sampling shall be thoroughly stirred until the contents are homogeneous.

A.4.4 Each sample container shall be sealed air-tight after filling and marked with necessary details of sampling.

A.5 SCALE OF SAMPLING

A.5.1 For ascertaining the conformity of a lot to the requirements of this specification, tests shall be carried out on each lot separately.

A.5.2 The number of containers to be selected from a lot shall be in accordance with Table 2.

TABLE 2 - Scale of sampling

Number of containers in the lot	Number of containers to be selected
Up to 8	2
9 to 25	3
26 to 100	5
101 to 500	8
501 to 1 000	13
1 001 and above	20

A.5.3 The containers shall be selected at random. In order to ensure randomness of selection random number tables as given in SLS 428 shall be used.

A.6 PREPARATION OF COMPOSITE SAMPLE

A.6.1 An equal quantity of material shall be drawn from top, middle, and bottom portions of each container selected as in A.5.2, using an appropriate sampling instrument.

A.6.2 The material obtained from each container as in A.6.1 shall be mixed together to form the composite sample.

A.6.3 The mixing shall be carried out in a clean, dry container and the quantity needed to carry out the required tests shall then be taken and placed in a sample container.

A.7 REFERENCE SAMPLE

A.7.1 If a reference sample is required, at least three times the quantity needed to carry out the required tests, shall be taken from the composite sample prepared as in A.6.2. This material shall be divided into three equal parts and each part shall be placed in separate sample containers.

A.7.2 One of these container shall be marked for the purchaser, one for the supplier, and the third as the reference sample to be used in case of dispute between the purchaser and the supplier.

A.8 NUMBER OF TESTS

A.8.1 Each container selected as in A.5.2 shall be examined for packaging and marking requirements.

A.8.2 The composite sample prepared as in A.6.2 shall be tested for the requirements specified in 3 of this specification.

SLS CERTIFICATION MARK

The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI *which includes surveillance inspection of the factory, testing of both factory and market samples.*

Further particulars of the terms and conditions of the permit may be obtained from the Sri *Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*

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SRI LANKA STANDARDS INSTITUTION

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Science & Technology.

The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and administrative control is vested in a Council appointed in accordance with the provisions of the Act.

The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in turn are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

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